~~Claims~~

WHAT IS CLAIMED IS:

1. - 21. (canceled)

22. (new) A method for determining defined states or modifications in the mucous membrane of the uterus or in the epithelium of other organs, the method comprising the step of:

determining specifically a concentration of at least one of human endometrial chorionic gonadotropin (eβhCG/ehCG) and non-trophoblastic hCG (hCG type I, β6, β7) in a sample of at least one of body liquid, tissue, and cells.

23. (new) The method according to claim 22, further comprising the step of determining a concentration of trophoblastic hCG (hCG type II, tβhCG) or total βhCG or total hCG.

24. (new) The method according to claim 22, wherein in the step of determining the concentration of endometrial hCG (eβhCG/ehCG) at least one antibody that recognizes specifically endometrial hCG (eβhCG/ehCG) and does not recognize trophoblastic hCG (hCG type II, tβhCG) is used.

25. (new) The method according to claim 24, wherein the at least one antibody recognizes specifically a peptide selected from peptide sequences according to SEQ ID No. 1 or 3 or partial sequences thereof.

26. (new) The method according to claim 23, wherein the concentration of endometrial hCG and optionally trophoblastic hCG or total βhCG or total hCG is determined in a sample selected from secretions, perfusion liquid, cells or tissue, wherein the sample originates from peripheral blood, serum, lochia, menstrual blood, amniotic fluid, urine, saliva, eye chamber fluid, the urogenital tract, the gastrointestinal tract, the respiratory tract or the

central nervous system.

27. (new) The method according to claim 22 for determining receptivity of the mucous membrane of the uterus for a fertilized egg in prospective and retrospective embryo implantation diagnostics, comprising the step of taking a sample in the early luteal phase in the form of tissue from the endometrium or from the cervical mucous membrane, a secretion of the vagina, the cervix, or the uterus, or serum, plasma, or peripheral blood and determining in the sample the non-trophoblastic or endometrial βhCG concentration.

28. (new) A method for determining defined states or modifications in the mucous membrane of the uterus or in the epithelium of other organs, the method comprising the step of determining a concentration of total hCG or of β subunits thereof in a sample of menstrual blood.

29. (new) An antibody recognizing specifically endometrial hCG (eβhCG/ehCG) and not trophoblastic hCG(hCG type II, tβhCG) and recognizing specifically a peptide selected from the peptide sequences according to SEQ ID No. 1 or No. 3 or partial sequences thereof.

30. (new) An antibody recognizing specifically the trophoblastic human chorionic gonadotropin (hCG type II/tβhCG) and not endometrial human chorionic gonadotropin (e βhCG/ehCG) and recognizing specifically a peptide selected from the peptide sequences according to SEQ ID No. 2 or No. 4 or partial sequences thereof.

31. (new) A test kit for determining defined states or modifications in the mucous membrane of the uterus or in the

epithelium of other organs comprising at least one antibody according to claim 29 or 30 and further antibodies and standards.

32. (new) An andometrial β subunit of human chorionic gonadotropin (eβhCG) having an amino acid sequence according to SEQ ID No. 10.

33. (new) A gene sequence β6e coding for the endometrial β subunit of human chorionic gonadotropin (eβhCG) according to SEQ ID No. 7.

34. (new) A peptide selected from the amino acid sequences according to a SEQ ID No. 1, 3, 12, and 14.

ABSTRACT OF THE DISCLOSURE

In a method for determining defined states or modifications in the mucous membrane of the uterus or in the epithelium of other organs, a concentration of at least one of human endometrial chorionic gonadotropin (eβhCG/ehCG) and non-trophoblastic hCG (hCG type I, β6, β7) is specifically determined in a sample of at least one of body liquid, tissue, and cells.

REMARKS

Claims 1 to 21 of the literal translation have been cancelled and replaced with claims 22 to 34 drafted in proper U.S. format. Proper headings according to the guidelines for drafting a nonprovisional patent application under 35 U.S.C. 111(a) have been added. A proper Abstract of the Disclosure has been added to the specification.

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on 5/30/06

/Gudrun E. Huckett/

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Ms. Gudrun E. Huckett, Ph.D.
Patent Agent
Registration No. 35747
Lönsstr. 53
42289 Wuppertal
GERMANY
Telephone: +49-202-257-0371
Facsimile: +49-202-257-0372
gudrun.draudt@t-online.de

GEH